

PATENT COOPERATION TREATY



PCT

NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:
KABUSHIKI KAISHA YASKAWA DENKI
2-1, Kurosaki-shiroishi,
Yahatanishi-ku
Kitakyushu-shi, Fukuoka 806-0004
JAPON

Date of mailing (day/month/year) 22 August 2002 (22.08.02)		
Applicant's or agent's file reference 0131		IMPORTANT NOTICE
International application No. PCT/JP02/01167	International filing date (day/month/year) 12 February 2002 (12.02.02)	Priority date (day/month/year) 14 February 2001 (14.02.01)
Applicant KABUSHIKI KAISHA YASKAWA DENKI et al		

1. Notice is hereby given that the International Bureau has **communicated**, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this notice:

KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

CN,EP

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this notice is a copy of the international application as published by the International Bureau on
22 August 2002 (22.08.02) under No. WO 02/065051

4. **TIME LIMITS for filing a demand for international preliminary examination and for entry into national phase**

The applicable time limit for entering the national phase will, **subject to what is said in the following paragraph** be **30 MONTHS** from the priority date, not only in respect of any elected Office if a demand for international preliminary examination is filed before the expiration of **19 months** from the priority date, but also in respect of any designated Office, in the absence of filing of such demand, where Article 22(1) as modified with effect from 1 April 2002 applies in respect of the designated Office. For further details, see PCT Gazette No.44/2001 of 1 November 2001, pages 19926, 19932 and 19934, as well as the PCT Newsletter, October and November 2001 and February 2002 issues.

In practice, **time limits other than the 30-month time limit** will continue to apply, for various periods of time, in respect of certain designated or elected Offices. For **regular updates on the applicable time limits** (20,21,30 or 31 months, or other time limit), Office by Office, refer to the PCT Gazette, the PCT Newsletter and the PCT Applicant's Guide, Volume II, National Chapters, all available from WIPO's Internet site, at <http://www.wipo.int/pct/en/index.html>.

For filing a **demand for international preliminary examination**, see the PCT Applicant's Guide, Volume I/A, Chapter IX. Only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II.)

It is the applicant's **sole responsibility** to monitor all these limits.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer J. Zahra Telephone No. (41-22) 338.91.11
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/01167

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ G01B7/30, G01D5/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ G01B7/30, G01D5/14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Toroku Jitsuyo Shinan Koho	1994-2002
Kokai Jitsuyo Shinan Koho	1971-2002	Jitsuyo Shinan Toroku Koho	1996-2002

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2001-33277 A (Yasukawa Electric Corp.), 09 February, 2001 (09.02.01), Full text; all drawings (Family: none)	1-4
Y	JP 2-174547 A (Matsushita Electric Works, Ltd.), 05 July, 1990 (05.07.90), Page 2, upper right column, lines 8 to 16; Fig. 1 (Family: none)	1-4
A	JP 63-305783 A (Mitsubishi Electric Corp.), 13 December, 1988 (13.12.88), Page 1, right column, line 11 to page 2, upper left column, line 5; Fig. 7 (Family: none)	1-4

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
14 May, 2002 (14.05.02)

Date of mailing of the international search report
28 May, 2002 (28.05.02)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

(19) 世界知的所有権機関
国際事務局



(43) 国際公開日
2002 年 8 月 22 日 (22.08.2002)

PCT

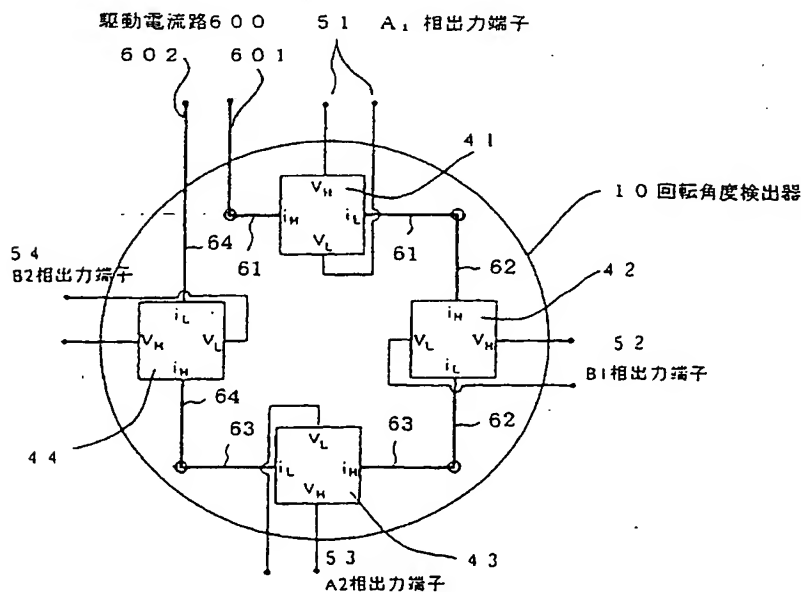
(10) 国際公開番号
WO 02/065051 A1

- (51) 国際特許分類: G01B 7/30, G01D 5/14 [JP/JP]: 〒806-0004 福岡県 北九州市 八幡西区黒崎城石2番1号 Fukuoka (JP).
- (21) 国際出願番号: PCT/JP02/01167
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- (25) 国際出願の言語: 日本語
- (26) 国際公開の言語: 日本語
- (30) 優先権データ: 特願2001-036259 2001 年 2 月 14 日 (14.02.2001) JP
- (71) 出願人 (米国を除く全ての指定国について): 株式会社 安川電機 (KABUSHIKI KAISHA YASKAWA DENKI)
- (72) 発明者: および
- (75) 発明者/出願人 (米国についてのみ): 松崎 一成 (MAT-SUZAKI, Kazunari) [JP/JP]: 〒806-0004 福岡県 北九州市 八幡西区黒崎城石2番1号 株式会社安川電機内 Fukuoka (JP). 長瀬 喬 (NAGASE, Takashi) [JP/JP]: 〒806-0004 福岡県 北九州市 八幡西区黒崎城石2番1号 株式会社安川電機内 Fukuoka (JP).
- (81) 指定国 (国内): CN, KR, US.
- (84) 指定国 (広域): ヨーロッパ特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

[続葉有]

(54) Title: ROTATING ANGLE DETECTOR AND DEVICE USING THE DETECTOR

(54) 発明の名称: 回転角度検出器およびその装置



10...ROTATING ANGLE DETECTOR
51...A1 PHASE OUTPUT TERMINAL
52...B1 PHASE OUTPUT TERMINAL
53...A2 PHASE OUTPUT TERMINAL
54...B2 PHASE OUTPUT TERMINAL
600...DRIVE CURRENT PATH

(57) Abstract: A rotating angle detector (10), comprising a magnetic field generating means rotated integrally with a detected body and, when stopped, uniformly generating magnetic field in the vertical one direction of a rotating shaft and at least two magnetic field detection elements (41), (42), (43), and (44) disposed so as to generate sinewaves at a rate of one per rotation of the magnetic field generating means, the magnetic field detection elements further comprising the drive current terminals (61), (62), (63), and (64) connected in series to each other, or comprising a circuit wiring having at least two signal differential amplifying means disposed on a substrate having at least two magnetic field detection elements disposed thereon to pass outputs from the magnetic field detection elements to the signal differential amplifying means; a device, comprising the plurality of rotating angle detectors disposed therein having the drive current terminals of the magnetic field detection elements all connected in series to each other.

[続葉有]



添付公開書類:
— 国際調査報告書

2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

(57) 要約:

本発明の回転角度検出器(10)は、被検出体と一体に回転し、静止時に回転軸の垂直且つ一方向に一様に磁界を生成する磁界発生手段と、各々が、前記磁界発生手段の1回転に対して1つの正弦波を発生するように配設された少なくとも2個の磁界検出素子(41), (42), (43), (44) とからなり、磁界検出素子の駆動電流端子(61), (62), (63), (64) を直列に接続した構成である。

また、少なくとも2個以上の磁界検出素子を配置した基板上に少なくとも2個以上の信号差動増幅手段を配置しており、各々の磁界検出素子からの出力を信号差動増幅手段に通過させた回路配線を有する構成にしてもよい。また、複数の回転角度検出器を配置した装置の磁界検出素子の駆動電流端子を全て直列に接続した構成にしてもよい。